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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/029,530	12/20/2001	Ryan T. Hirose	11403.00	5881
20686	7590	09/08/2004	EXAMINER	
DORSEY & WHITNEY, LLP INTELLECTUAL PROPERTY DEPARTMENT 370 SEVENTEENTH STREET SUITE 4700 DENVER, CO 80202-5647			ENGLUND, TERRY LEE	
			ART UNIT	PAPER NUMBER
			2816	

DATE MAILED: 09/08/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/029,530

Applicant(s)

HIROSE ET AL.

Examiner

Terry L Englund

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 May 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 4-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1, 4-15 and 17-21 is/are allowed.
- 6) ☒ Claim(s) 16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 May 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment/Drawings

The amendment and drawings submitted on May 25, 2004 were reviewed and considered with the following results:

The drawings overcame the objection to the drawings described in the previous Office Action, which has now been withdrawn.

The amendment also overcame the objection to the disclosure, and the claim numbering, wherein the co-pending information on page 1 has been updated, and the original misnumbered claims 20-23 are now clearly renumbered as claims 18-21. Therefore, those objections have also been withdrawn. However, when the claims were carefully reconsidered, an inadvertent oversight by the examiner, with respect to claim 21, was noted. This is described later under the Claim Objection section.

The cancellation of claims 2-3 rendered their respective objection(s) and/or rejection(s) moot.

The amended claims overcame the rejections of claims 7-8, 12-13, 17, and 19-21 under 35 U.S.C. 112, second paragraph as described in the previous Office Action. Those rejections have been withdrawn.

The amended claims also overcame all of their respective prior art rejections, which have now been withdrawn. Those withdrawn rejections include: 1) claims 1, 5, 9, 11, 15, and 21 under 35 U.S.C. 102(b) with respect to Park et al.; 2) claims 1, 5, 10, 11, 14, and 21 under 35 U.S.C. 102(b) with respect to Maloney; 3) claims 1, 5, 7-9, 11, 15, and 21 under 35 U.S.C. 102(b) with respect to Vajdic; and 4) claim 13 under 35 U.S.C. 103(a) with respect to Park et al.

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None of the references of Park et al., Maloney, or Vajdic clearly shows or discloses the fourth switch for clamping the high voltage signal to ground as now recited within claim 1 (upon which claims 5, 7-11, and 13-15 depend), or where the method of claim 21, now depending on claim 18, requires the clamping device to be activated when the high voltage signal approaches the supply line voltage level.

Although the previous Office Action had indicated claim 16 was only objected to, and would have been allowable if rewritten in independent form, several references found during the recent update search requires the previous Office Action's allowability related statement to be withdrawn with respect to claim 16. Two prior art rejections of that claim are described later under the appropriate section.

Therefore, this action is NON-FINAL.

Claim Objections

Claim 21 is objected to because of the following informality: Claim 21, line 1 "claims" should be singular. [This oversight was inadvertently left out of the previous Office Action.] An appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claim 16 is rejected under 35 U.S.C. 102(b) as being anticipated by Hollingsworth et al. (Hollingsworth), a reference found during the recent update search. Fig. 1 shows a circuit for discharging a high voltage signal to a supply voltage line. The circuit comprises first switch Nx1 receiving the high voltage signal $+V_{DD}$ (on line/node Gx1 via Px1); the output (i.e. source) of first switch Nx1 is coupled to the input (i.e. drain) of second switch N7; the output (i.e. source) of second switch N7 is coupled to the input (i.e. drain) of third switch N100, which has its output (i.e. source) coupled to the supply voltage line (i.e. ground). When the first, second, and third switches Nx1, N7, and N100, respectively, are on, the high voltage signal at Gx1 discharges to the supply voltage line (e.g. see column 7, lines 29-33). Since third switch N100 is an n-channel transistor, claim 16 is anticipated.

Claim 16 is also rejected under 35 U.S.C. 102(e) as being anticipated by Yamaki et al. (Yamaki), another reference found during the recent update search. Fig. 19 shows two separate circuits 8 and 8 for discharging a high voltage signal, on their respective line ydt or ydb, to supply voltage line Vss. Each circuit comprises first switch M33 receiving the high voltage signal (on respective line ydt or ydb); the output (i.e. source) of first switch M33 is coupled to the input (i.e. drain) of second switch M35; the output (i.e. source) of second switch M35 is coupled to the input (i.e. drain) of third switch M34, which has its output (i.e. source) coupled to supply voltage line Vss. When the first, second, and third switches M33, M35, and M34, respectively, are on, one of ordinary skill in the art would understand the high voltage signal on line ydt (or ydb) discharges to supply voltage line Vss. Since third switch M34 is an n-channel transistor, claim 16 is anticipated.

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Allowable Subject Matter

Claims 1, 4-15, and 17-21 are allowed. None of the prior art references reviewed and considered shows or discloses the circuit (or method) for discharging a high voltage signal to a supply voltage line as recited within independent claims 1, 4, 6, 12, and 18. More specifically, none of the references clearly shows or discloses: 1) the fourth switch for clamping the high voltage signal to ground as recited within claims 1 (upon which claims 5, 7-11, and 13-15 depend), 12, and 17; 2) the fourth and fifth switches as recited within claim 4; 3) the fourth switch and control logic as recited within claim 6; and 4) a clamping device, sensing the discharge, for activating when the high voltage signal approaches the supply line voltage level as recited within claim 18 (upon which claims 19-21 depend). Since there is no strong motivation to modify or combine any prior art reference(s) to ensure a circuit for discharging, comprising at least first-third switches, also includes the above limitations, or the clamping/activating step as recited within claim 18, the claims are deemed patentably distinct over the prior art of record.

Claims 2-3 have been cancelled.

Since a re-interpretation of the claimed limitations, and references found during the recent update search, necessitated the new ground(s) of rejection presented in this Office action, **THIS ACTION IS MADE NON-FINAL**. The applicants are reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period

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will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication, or previous communications, from the examiner should be directed to Terry L. Englund whose telephone number is (571) 272-1743.

The examiner can normally be reached Monday-Friday from 7 AM to 3 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tim Callahan, can be reached on (571) 272-1740.

The new central official fax number is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (571) 272-1562.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

TLE

Terry L. Englund

4 September 2004


TIMOTHY P. CALLAHAN
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